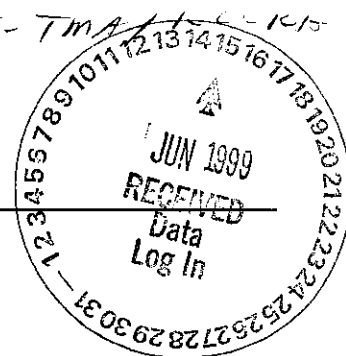


**Recra LabNet Philadelphia  
Analytical Report**

0051544



**Client :** TNU-HANFORD B99-062  
**RFW# :** 9904L832  
**SDG/SAF #:** H0395/B99-062

**W.O. #:** 10985-001-001-9999-00  
**Date Received:** 04-30-99

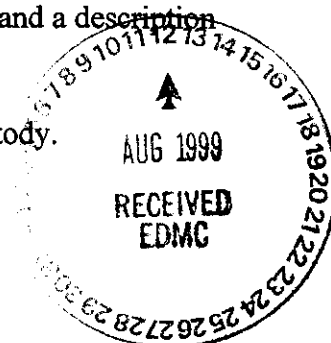
**GC/MS VOLATILE**


Four (4) water samples were collected on 04-28-99.

The samples and their associated QC samples were analyzed according to criteria set forth in Recra OPs based on SW 846 Method 8260A for TCL Volatile target compounds on 05-01,12-99.

The following is a summary of the QC results accompanying these sample results and a description of any problems encountered during their analyses:

1. The cooler temperature upon receipt has been recorded on the chain-of-custody.
2. The required holding time for analysis was met.
3. Non-target compounds were detected in the samples.
4. Sample B0VDC6 required medium level analysis due to high levels of both target and non-target compounds.
5. All surrogate recoveries were within EPA QC limits.
6. The method blanks contained the common laboratory contaminants Methylene Chloride and Acetone at levels less than the CRQL.



  
\_\_\_\_\_  
J. Michael Taylor  
Vice President  
Philadelphia Analytical Laboratory

6-11-99  
Date

som\group\data\voa\tnu04832.doc

The results presented in this report relate only to the analytical testing and conditions of the samples at receipt and during storage. All pages of this report are integral parts of the analytical data. Therefore, this report should only be reproduced in its entirety of 15 pages.

## GLOSSARY OF VOA DATA

### DATA QUALIFIERS

- U** = Compound was analyzed for but not detected. The associated numerical value is the estimated sample quantitation limit which is included and corrected for dilution and percent moisture.
- J** = Indicates an estimated value. This flag is used under the following circumstances: 1) when estimating a concentration for tentatively identified compounds (TICs) where a 1:1 response is assumed; or 2) when the mass spectral data indicate the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero. For example, if the limit of detection is 10 ug/L and a concentration of 3 ug/L is calculated, it is reported as 3J.
- B** = This flag is used when the analyte is found in the associated blank as well as in the sample. It indicates possible/probable blank contamination. This flag is also used for a TIC as well as for a positively identified TCL compound.
- E** = Indicates that the compound was detected beyond the calibration range and was subsequently analyzed at a dilution.
- D** = Identifies all compounds identified in an analysis at a secondary dilution factor.
- I** = Interference.
- NQ** = Result qualitatively confirmed but not able to quantify.
- N** = Indicates presumptive evidence of a compound. This flag is only used for tentatively identified compounds (TICs), where the identification is based on a mass spectral library search. It is applied to all TIC results. For generic characterization of a TIC, such as chlorinated hydrocarbon, the N code is not used.
- X** = This flag is used for a TIC compound which is quantified relative to a response factor generated from a daily calibration standard (rather than quantified relative to the closest internal standard).
- Y** = Additional qualifiers used as required are explained in the case narrative.



## **GLOSSARY OF VOA DATA**

### **ABBREVIATIONS**

<b>BS</b>	<b>=</b>	Indicates blank spike in which reagent grade water is spiked with the CLP matrix spike solutions and carried through all the steps in the method. Spike recoveries are reported.
<b>BSD</b>	<b>=</b>	Indicates blank spike duplicate.
<b>MS</b>	<b>=</b>	Indicates matrix spike.
<b>MSD</b>	<b>=</b>	Indicates matrix spike duplicate.
<b>DL</b>	<b>=</b>	Suffix added to sample number to indicate that results are from a diluted analysis.
<b>NA</b>	<b>=</b>	Not Applicable.
<b>DF</b>	<b>=</b>	Dilution Factor.
<b>NR</b>	<b>=</b>	Not Required.
<b>SP, Z</b>	<b>=</b>	Indicates Spiked Compound.



## 04

Report Date: 05/13/99 16:18

Work Order: 10985001001 Page: 1a

92-05-13-99

Cust ID:	B0VDC7	B0VDC8	B0VDC9	B0VDC6	VBLKAR	VBLKCE
RFW#:	001	002	003	004	99LVN134-MB1	99LVH154-MB1
Level:	LOW	LOW	LOW	MED	LOW	MED

Chlorobenzene	5 U	5 U	5 U	2500 U	5 U	2500 U
Ethylbenzene	5 U	5 U	5 U	39000	5 U	2500 U
Styrene	5 U	5 U	5 U	2500 U	5 U	2500 U
Xylene (total)	5 U	5 U	5 U	44000	5 U	2500 U

\*= Outside of EPA CLP QC limits.

gw  
05-1399

1E  
VOLATILE ORGANICS ANALYSIS SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

B0VDC7

Lab Name: Recra.LabNet Contract: 10985001001

Lab Code: Recra Case No.: \_\_\_\_\_ SAS No.: \_\_\_\_\_ SDG No.: \_\_\_\_\_

Matrix: (soil/water) WATER Lab Sample ID: 9904L832-001

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: n050105

Level: (low/med) LOW Date Received: 04/30/99

% Moisture: not dec. \_\_\_\_\_ Date Analyzed: 05/01/99

Column: (pack/cap) CAP Dilution Factor: 1.00

Number TICs found: 1 CONCENTRATION UNITS:  
(ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	SILANE	9.032	20	J

1E  
VOLATILE ORGANICS ANALYSIS SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

B0VDC8

Lab Name: Recra.LabNet Contract: 10985001001

Lab Code: Recra Case No.: \_\_\_\_\_ SAS No.: \_\_\_\_\_ SDG No.: \_\_\_\_\_

Matrix: (soil/water) WATER Lab Sample ID: 9904L832-002

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: n050106

Level: (low/med) LOW Date Received: 04/30/99

% Moisture: not dec. \_\_\_\_\_ Date Analyzed: 05/01/99

Column: (pack/cap) CAP Dilution Factor: 1.00

Number TICs found: 1 CONCENTRATION UNITS:  
(ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	SILANE	9.025	8	J

1E  
VOLATILE ORGANICS ANALYSIS SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

B0VDC9

Lab Name: Recra, LabNet Contract: 10985001001

Lab Code: Recra Case No.: \_\_\_\_\_ SAS No.: \_\_\_\_\_ SDG No.: \_\_\_\_\_

Matrix: (soil/water) WATER Lab Sample ID: 9904L832-003

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: n050107

Level: (low/med) LOW Date Received: 04/30/99

% Moisture: not dec. \_\_\_\_\_ Date Analyzed: 05/01/99

Column: (pack/cap) CAP Dilution Factor: 1.00

Number TICs found: 1 CONCENTRATION UNITS:  
(ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	SILANE	9.026	8	J



1E  
VOLATILE ORGANICS ANALYSIS SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

B0VDC6

Lab Name: Recra.LabNet

Contract: 10985001001

Lab Code: Recra

Case No.: \_\_\_\_\_

SAS No.: \_\_\_\_\_

SDG No.: \_\_\_\_\_

Matrix: (soil/water) WATER

Lab Sample ID: 9904L832-004

Sample wt/vol: 1.00 (g/mL) ML

Lab File ID: h051213

Level: (low/med) MED

Date Received: 04/30/99

% Moisture: not dec. \_\_\_\_\_

Date Analyzed: 05/12/99

Column: (pack/cap) CAP

Dilution Factor: 8.00

CONCENTRATION UNITS:

Number TICs found: 5

(ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 76131	ETHANE, 1,1,2-TRICHLORO-1,2,	8.617	200000	NJ
2. 142825	HEPTANE	14.374	8000	NJ
3. 98828	BENZENE, (1-METHYLETHYL) -	20.240	7000	NJ
4. 104767	1-HEXANOL, 2-ETHYL-	21.850	30000	NJ
5. 103093	ACETIC ACID, 2-ETHYLHEXYL ES	22.650	10000	NJ

1E  
VOLATILE ORGANICS ANALYSIS SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLKAR

Lab Name: Recra.LabNet Contract: 10985001001

Lab Code: Recra Case No.: \_\_\_\_\_ SAS No.: \_\_\_\_\_ SDG No.: \_\_\_\_\_

Matrix: (soil/water) WATER Lab Sample ID: 99LVN134-MB1

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: n050104

Level: (low/med) LOW Date Received: 05/01/99

% Moisture: not dec. \_\_\_\_\_ Date Analyzed: 05/01/99

Column: (pack/cap) CAP Dilution Factor: 1.00

Number TICs found: 0 CONCENTRATION UNITS:  
(ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				

1E  
VOLATILE ORGANICS ANALYSIS SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLKCE

Lab Name: Recra.LabNet Contract: NONE

Lab Code: Recra Case No.:            SAS No.:            SDG No.:           

Matrix: (soil/water) ~~SOIL~~ WATER Lab Sample ID: 99LVH154-MB1

Sample wt/vol: 1.00 (g/mL) G Lab File ID: h051204

Level: (low/med) MED Date Received: 05/12/99

% Moisture: not dec. 0 Date Analyzed: 05/12/99

Column: (pack/cap) CAP Dilution Factor: 8.00

Number TICs found: 0 CONCENTRATION UNITS:  
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
=====	=====	=====	=====	=====
1.				

Recra LabNet - Lionville Laboratory  
VOA ANALYTICAL DATA PACKAGE FOR  
TNU-HANFORD B99-062

DATE RECEIVED: 04/30/99

RFW LOT # :9904L832

CLIENT ID	RFW #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
B0VDC7	001	W	99LVN134	04/28/99	N/A	05/01/99
B0VDC8	002	W	99LVN134	04/28/99	N/A	05/01/99
B0VDC9	003	W	99LVN134	04/28/99	N/A	05/01/99
B0VDC6	004	M1	W 99LVH154	04/28/99	N/A	05/12/99

LAB QC:

VBLKAR	MB1	W	99LVN134	N/A	N/A	05/01/99
VBLKCE	MB1	W	99LVH154	N/A	N/A	05/12/99

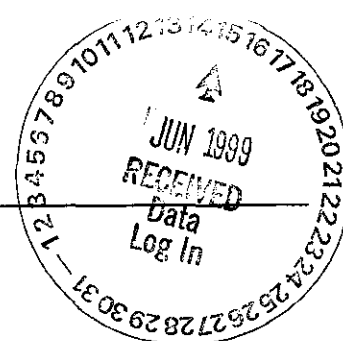
*aw*  
0513-99

## Custody Transfer Record/Lab Work Request

Bechtel Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				B99-062-02		Page 1 of 1	
Collector R. Nielson/D. Bowers		Company Contact Joan Kessner		Telephone No. 375-4688		Project Coordinator WEISS, RL		Price Code 72 hrs	
Project Designation 3728 Building Floor Sealer		Sampling Location 300 Area		SAF No. B99-062				Data Turnaround business D	
Ice Chest No. ERC 99-005012		Field Logbook No. EL-1381-2		Method of Shipment Federal Express					
Shipped To TMA/RECRA 4-28-99		Offsite Property No. A990126		Bill of Lading/Air Bill No. 4235 7952 5371					
				COA ME4123 A81C					
POSSIBLE SAMPLE HAZARDS/REMARKS   Special Handling and/or Storage Cool 4C			Preservation	Cool 4C	HCl to pH <2 Cool 4C				
			Type of Container	aGs*	aGs*				
			No. of Container(s)	1	3				
			Volume	1000mL	40mL				
SAMPLE ANALYSIS				Semi-VOA - 8270A (TCL)	VOA - 8260A (TCL)				
Sample No.	Matrix *	Sample Date	Sample Time						
B0VDC7	Water	4-28-99	1306	X	X				
B0VDC8	Water	4-28-99	1621	X	X				
B0VDC9	Water	4-28-99	1628	X	X				
CHAIN OF POSSESSION		Sign/Print Names				SPECIAL INSTRUCTIONS			Matrix *
Relinquished By <i>R. Nielson</i>		Date/Time 4/28/99 1700		Received By <i>Ref. 1A</i>		** Close SDG upon receipt.			Soil Water Vapor Other Solid Other Liquid
Relinquished By <i>Ref 1A</i>		Date/Time 4-28-99 0930		Received By <i>Doug Bowers</i>					
Relinquished By <i>Doug Bowers</i>		Date/Time 4-29-99/1630		Received By <i>Eric Ex</i>					
Relinquished By <i>Eric Ex</i>		Date/Time 4/30/99/0900		Received By <i>D. Jones</i>					
LABORATORY SECTION	Received By		Date/Time		Title				
FINAL SAMPLE DISPOSITION	Disposal Method		Date/Time		Disposed By				

Bechtel Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				B99-062-01		Page 1 of 1	
Collector R. Nielson/D. Bowers		Company Contact Joan Kessner		Telephone No. 375-4688		Project Coordinator WEISS, RL		Price Code 72 hrs	
Project Designation 3728 Building Floor Sealer		Sampling Location 100N		SAF No. B99-062		Data Turnaround business D			
Ice Chest No. ERC 99-003		Field Logbook No. EL-1381-2		Method of Shipment Federal Express					
Shipped To TMA/RECRA 4-29-99 AFB		Offsite Property No. A990125		Bill of Lading/Air Bill No. 4235 7952 5360-4.8					
				COA					
POSSIBLE SAMPLE HAZARDS/REMARKS  Special Handling and/or Storage Cool 4C		Preservation		Cool 4C					
		Type of Container		aGs*					
		No. of Container(s)		1					
		Volume		40mL					
SAMPLE ANALYSIS				VOA - #260A (TCL)					
Sample No.	Matrix *	Sample Date	Sample Time						
B0VDC6	original floor sealant material 4-29-99	4-28-99	1326	X					
CHAIN OF POSSESSION		Sign/Print Names			SPECIAL INSTRUCTIONS ** Sample B0VDC6 is original floor sealant material (greater than 40% organic). Ship VOA bottles only for this sample. ** Close SDG upon receipt.			Matrix * Soil Water Vapor Other Solid Other Liquid	
Relinquished By Doug Bowers		Date/Time 4-29-99/1700		Received By cooler ERC97-079		Date/Time 4-28-99/1700		on ice in ERC97-079  samples from non rod area	
Relinquished By cooler ERC97-079		Date/Time 4-29-99/0920		Received By Doug Bowers		Date/Time 4-29-99/0930			
Relinquished By Doug Bowers		Date/Time 4-29-99/1030		Received By Cool Ex		Date/Time			
Relinquished By Deelup		Date/Time 4/30/99 0900		Received By D Smith		Date/Time 4/30/99 0900			
LABORATORY SECTION		Received By			Title			Date/Time	
FINAL SAMPLE DISPOSITION		Disposal Method			Disposed By			Date/Time	

**Recra LabNet Philadelphia  
Analytical Report**



**Client :** TNU-HANFORD B99-062  
**RFW# :** 9904L832  
**SDG/SAF #:** H0395/B99-062

**W.O. #:** 10985-001-001-9999-00  
**Date Received:** 04-30-99

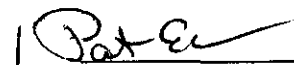
**SEMIVOLATILE**

Three (3) water samples were collected on 04-28-99.

The samples and their associated QC samples were extracted on 05-03-99 and analyzed according to criteria set forth in Recra OPs based on SW 846 Method 8270B for TCL Semivolatile target compounds on 05-09,11-99.

The following is a summary of the QC results accompanying the sample results and a description of any problems encountered during their analyses:

1. The cooler temperature upon receipt has been recorded on the chain-of-custody.
2. All required holding times for extraction and analysis were met.
3. Non-target compounds were detected in the samples.
4. The levels reported for Dimethylphthalate and Di-n-butylphthalate in sample B0VDC9 exceeded the calibration range; however, this analysis was for screen purposes and dilution was not required.
5. Two (2) of thirty (30) surrogate recoveries were outside EPA QC limits. The out of criteria surrogate recoveries reported for sample B0VDC9 are due to a probable matrix effect.
6. All blank spike recoveries were within EPA QC limits.
7. The method blank contained the common laboratory contaminants Di-n-butylphthalate and Bis(2-ethylhexyl)phthalate at levels less than the CRQL.

  
\_\_\_\_\_  
J. Michael Taylor  
Vice President  
Philadelphia Analytical Laboratory

6-11-99  
Date

som\group\data\bna\tnu04832.doc

The results presented in this report relate only to the analytical testing and conditions of the samples at receipt and during storage. All pages of this report are integral parts of the analytical data. Therefore, this report should only be reproduced in its entirety of 13 pages.



## GLOSSARY OF BNA DATA

### DATA QUALIFIERS

U	=	Compound was analyzed for but not detected. The associated numerical value is the estimated sample quantitation limit which is included and corrected for dilution and percent moisture.
J	=	Indicates an estimated value. This flag is used under the following circumstances: 1) when estimating a concentration for tentatively identified compounds (TICs) where a 1:1 response is assumed; or 2) when the mass spectral data indicate the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero. For example, if the limit of detection is 10 ug/L and a concentration of 3 ug/L is calculated, it is reported as 3J.
B	=	This flag is used when the analyte is found in the associated blank as well as in the sample. It indicates possible/probable blank contamination. This flag is also used for a TIC as well as for a positively identified TCL compound.
E	=	Indicates that the compound was detected beyond the calibration range and was subsequently analyzed at a dilution.
D	=	Identifies all compounds identified in an analysis at a secondary dilution factor.
I	=	Interference.
NQ	=	Result qualitatively confirmed but not able to quantify.
A	=	Indicates that a TIC is a suspected aldol-condensation product.
N	=	Indicates presumptive evidence of a compound. This flag is only used for tentatively identified compounds (TICs), where the identification is based on a mass spectral library search. It is applied to all TIC results. For generic characterization of a TIC, such as chlorinated hydrocarbon, the N code is not used.
X	=	This flag is used for a TIC compound which is quantified relative to a response factor generated from a daily calibration standard (rather than quantified relative to the closest internal standard).
Y	=	Additional qualifiers used as required are explained in the case narrative.



## GLOSSARY OF BNA DATA

### ABBREVIATIONS

<b>BS</b>	=	Indicates blank spike in which reagent grade water is spiked with the CLP matrix spike solutions and carried through all the steps in the method. Spike recoveries are reported.
<b>BSD</b>	=	Indicates blank spike duplicate.
<b>MS</b>	=	Indicates matrix spike.
<b>MSD</b>	=	Indicates matrix spike duplicate.
<b>DL</b>	=	Suffix added to sample number to indicate that results are from a diluted analysis.
<b>NA</b>	=	Not Applicable.
<b>DF</b>	=	Dilution Factor.
<b>NR</b>	=	Not Required.
<b>SP, Z</b>	=	Indicates Spiked Compound.



Recra LabNet - Lionville Laboratory

Semivolatiles by GC/MS, HSL List

Report Date: 05/10/99 12:14

RFW Batch Number: 9904L832

Client: TNU-HANFORD B99-062

Work Order: 10985001001

Page: 1a

04

Cust ID:		BOVDC7	BOVDC8	BOVDC9	SBLKVJ	SBLKVJ BS
Sample RFW#:		001	002	003	99LE0535-MB1	99LE0535-MB1
Information Matrix:		WATER	WATER	WATER	WATER	WATER
D.F.:		1.00	1.00	1.00	1.00	1.00
Units:		UG/L	UG/L	UG/L	UG/L	UG/L
Surrogate Recovery	Nitrobenzene-d5	68 %	59 %	140 * %	68 %	72 %
	2-Fluorobiphenyl	57 %	59 %	76 %	60 %	68 %
	Terphenyl-d14	77 %	73 %	66 %	80 %	79 %
	Phenol-d5	67 %	39 %	2 * %	63 %	42 %
	2-Fluorophenol	64 %	22 %	33 %	64 %	70 %
	2,4,6-Tribromophenol	74 %	35 %	82 %	81 %	89 %
=====fl=====fl=====fl=====fl=====fl=====fl=====fl=====						
	Phenol	10 U	10 U	10 U	10 U	72 %
	bis(2-Chloroethyl) ether	10 U	10 U	10 U	10 U	10 U
	2-Chlorophenol	10 U	10 U	10 U	10 U	69 %
	1,3-Dichlorobenzene	10 U	10 U	10 U	10 U	10 U
	1,4-Dichlorobenzene	10 U	10 U	10 U	10 U	42 %
	1,2-Dichlorobenzene	10 U	10 U	10 U	10 U	10 U
	2-Methylphenol	10 U	10 U	10 U	10 U	10 U
	2,2'-oxybis(1-Chloropropane)	10 U	10 U	10 U	10 U	10 U
	4-Methylphenol	10 U	10 U	10 U	10 U	10 U
	N-Nitroso-di-n-propylamine	10 U	10 U	10 U	10 U	71 %
	Hexachloroethane	10 U	10 U	10 U	10 U	10 U
	Nitrobenzene	10 U	10 U	10 U	10 U	10 U
	Isophorone	10 U	10 U	10 U	10 U	10 U
	2-Nitrophenol	10 U	10 U	10 U	10 U	10 U
	2,4-Dimethylphenol	10 U	10 U	10 U	10 U	10 U
	bis(2-Chloroethoxy) methane	10 U	10 U	10 U	10 U	10 U
	2,4-Dichlorophenol	10 U	10 U	10 U	10 U	10 U
	1,2,4-Trichlorobenzene	10 U	10 U	10 U	10 U	45 %
	Naphthalene	10 U	10 U	10 U	10 U	10 U
	4-Chloroaniline	10 U	10 U	10 U	10 U	10 U
	Hexachlorobutadiene	10 U	10 U	10 U	10 U	10 U
	4-Chloro-3-methylphenol	10 U	10 U	10 U	10 U	70 %
	2-Methylnaphthalene	10 U	10 U	10 U	10 U	10 U
	Hexachlorocyclopentadiene	10 U	10 U	10 U	10 U	10 U
	2,4,6-Trichlorophenol	10 U	10 U	10 U	10 U	10 U
	2,4,5-Trichlorophenol	25 U	25 U	25 U	25 U	25 U

\*= Outside of EPA CLP QC limits.

Cust ID:

B0VDC7

B0VDC8

B0VDC9

SBLKVJ

SBLKVJ BS

RFW#:

001

002

003

99LE0535-MB1

99LE0535-MB1

2-Chloronaphthalene	10 U	10 U	10 U	10 U	10 U
2-Nitroaniline	25 U	25 U	25 U	25 U	25 U
Dimethylphthalate	10 U	1 J	1600 E	10 U	10 U
Acenaphthylene	10 U	10 U	10 U	10 U	10 U
2,6-Dinitrotoluene	10 U	10 U	10 U	10 U	10 U
3-Nitroaniline	25 U	25 U	25 U	25 U	25 U
Acenaphthene	10 U	10 U	10 U	10 U	69 %
2,4-Dinitrophenol	25 U	25 U	25 U	25 U	25 U
4-Nitrophenol	25 U	25 U	25 U	25 U	69 %
Dibenzofuran	10 U	10 U	10 U	10 U	10 U
2,4-Dinitrotoluene	10 U	10 U	10 U	10 U	72 %
Diethylphthalate	10 U	10 U	4 J	10 U	10 U
4-Chlorophenyl-phenylether	10 U	10 U	10 U	10 U	10 U
Fluorene	10 U	10 U	10 U	10 U	10 U
4-Nitroaniline	25 U	25 U	25 U	25 U	25 U
4,6-Dinitro-2-methylphenol	25 U	25 U	25 U	25 U	25 U
N-Nitrosodiphenylamine (1)	10 U	10 U	10 U	10 U	10 U
4-Bromophenyl-phenylether	10 U	10 U	10 U	10 U	10 U
Hexachlorobenzene	10 U	10 U	10 U	10 U	10 U
Pentachlorophenol	25 U	25 U	25 U	25 U	80 %
Phenanthrene	10 U	10 U	10 U	10 U	10 U
Anthracene	10 U	10 U	10 U	10 U	10 U
Carbazole	10 U	10 U	10 U	10 U	10 U
Di-n-butylphthalate	10 U	2 JB	500 EB	0.7 J	1 JB
Fluoranthene	10 U	10 U	10 U	10 U	10 U
Pyrene	10 U	10 U	10 U	10 U	75 %
Butylbenzylphthalate	10 U	2 J	10 U	10 U	10 U
3,3'-Dichlorobenzidine	10 U	10 U	10 U	10 U	10 U
Benzo(a)anthracene	10 U	10 U	10 U	10 U	10 U
Chrysene	10 U	10 U	10 U	10 U	10 U
bis(2-Ethylhexyl)phthalate	10 U	10 U	2 JB	2 J	10 U
Di-n-octyl phthalate	10 U	10 U	10 U	10 U	10 U
Benzo(b)fluoranthene	10 U	10 U	10 U	10 U	10 U
Benzo(k)fluoranthene	10 U	10 U	10 U	10 U	10 U
Benzo(a)pyrene	10 U	10 U	10 U	10 U	10 U
Indeno(1,2,3-cd)pyrene	10 U	10 U	10 U	10 U	10 U
Dibenz(a,h)anthracene	10 U	10 U	10 U	10 U	10 U
Benzo(g,h,i)perylene	10 U	10 U	10 U	10 U	10 U

(1) - Cannot be separated from Diphenylamine. \*= Outside of EPA CLP QC limits.

1F  
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

B0VDC7

Lab Name: Recra.LabNet

Contract: 10985001001

Lab Code: Recra

Case No.: \_\_\_\_\_

SAS No.: \_\_\_\_\_

SDG No.: \_\_\_\_\_

Matrix: (soil/water) WATER

Lab Sample ID: 9904L832-001

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: D050909

Level: (low/med) LOW

Date Received: 04/30/99

% Moisture: \_\_\_\_\_ decanted: (Y/N) \_\_\_\_\_

Date Extracted: 05/03/99

Concentrated Extract Volume: 1000 (uL)

Date Analyzed: 05/09/99

Injection Volume: 2.0 (uL)

Dilution Factor: 1.00

GPC Cleanup: (Y/N) N

pH: 7.0

CONCENTRATION UNITS:

Number TICs found: 2

(ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	7.32	5	JB
2.	UNKNOWN	7.67	2	J

1F  
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BOVDC8

Lab Name: Recra.LabNet Contract: 10985001001

Lab Code: Recra Case No.: \_\_\_\_\_ SAS No.: \_\_\_\_\_ SDG No.: \_\_\_\_\_

Matrix: (soil/water) WATER Lab Sample ID: 9904L832-002

Sample wt/vol: 1000 (g/mL) ML Lab File ID: D050910

Level: (low/med) LOW Date Received: 04/30/99

% Moisture: \_\_\_\_\_ decanted: (Y/N) \_\_\_\_\_ Date Extracted: 05/03/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 05/09/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: 7.0

CONCENTRATION UNITS:

Number TICs found: 6 (ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	METHOXYETHOXYETHANOL	7.32	7	J
2.	UNKNOWN	9.00	10	J
3.	BUTOXYETHOXYETHANOL	11.69	90	J
4. 95-16-9	BENZOTHAZOLE	12.59	4	JN
5. 149-30-4	2-MERCAPTOBENZOTHAZOLE	20.92	4	JN
6.	ALKANE	24.74	4	J

1F  
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

B0VDC9

Lab Name: Recra.LabNet Contract: 10985001001

Lab Code: Recra Case No.: \_\_\_\_\_ SAS No.: \_\_\_\_\_ SDG No.: \_\_\_\_\_

Matrix: (soil/water) WATER Lab Sample ID: 9904L832-003

Sample wt/vol: 1000 (g/mL) ML Lab File ID: D050911

Level: (low/med) LOW Date Received: 04/30/99

% Moisture: \_\_\_\_\_ decanted: (Y/N) \_\_\_\_\_ Date Extracted: 05/03/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 05/09/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: 7.0

Number TICs found: 5 CONCENTRATION UNITS:  
(ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	SILOXANE	10.89	500	J
2.	BUTOXYETHOXYETHANOL	12.35	20000	J
3.	UNKNOWN	20.03	500	J
4.	UNKNOWN	20.31	1000	J
5.	2-BUTOXYETHANOL PHOSPHATE	23.00	400	J

1F  
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

SBLKVJ

Lab Name: Recra.LabNet Contract: 10985001001

Lab Code: Recra Case No.: \_\_\_\_\_ SAS No.: \_\_\_\_\_ SDG No.: \_\_\_\_\_

Matrix: (soil/water) WATER Lab Sample ID: 99LE0535-MB1

Sample wt/vol: 1000 (g/mL) ML Lab File ID: D051103

Level: (low/med) LOW Date Received: 05/03/99

% Moisture: \_\_\_\_\_ decanted: (Y/N) \_\_\_\_\_ Date Extracted: 05/03/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 05/11/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: 7.0

Number TICs found: 7 CONCENTRATION UNITS:  
(ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	6.01	2	J
2.	UNKNOWN	6.45	2	J
3.	UNKNOWN	6.72	4	J
4.	UNKNOWN	6.97	4	J
5.	UNKNOWN	7.02	7	J
6.	UNKNOWN	7.33	6	J
7.	UNKNOWN	13.07	2	J



Recra LabNet - Lionville Laboratory  
BNA ANALYTICAL DATA PACKAGE FOR  
TNU-HANFORD B99-062

DATE RECEIVED: 04/30/99

RFW LOT # :9904L832

CLIENT ID	RFW #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
B0VDC7	001	W	99LE0535	04/28/99	05/03/99	05/09/99
B0VDC8	002	W	99LE0535	04/28/99	05/03/99	05/09/99
B0VDC9	003	W	99LE0535	04/28/99	05/03/99	05/09/99

LAB QC:

SBLKVJ	MB1	W	99LE0535	N/A	05/03/99	05/11/99
SBLKVJ	MB1 BS	W	99LE0535	N/A	05/03/99	05/11/99

9904L832

## Custody Transfer Record/Lab Work Request

[illegible][illegible]

**FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS**

**Special instructions:**

OGCSC - see steve wesson

## COMPOSITE WASTE

**DATE/REVISIONS:**

DATE/REVISIONS: 1. No QC Required

5/11/99 added to GC Scan (over)

\_\_\_\_\_ 3.

\_\_\_\_\_ 4.

~~SECRET~~ 5.

~~\_\_\_\_\_~~ 6.

**RECRA LabNet Use Only**

**Samples were:**

1) Shipped        or  
Hand Delivered       

Airbill # 

2) Ambient or chilled

3) Received in Good Condition ☒ Y or N

4) Labels Indicate  
Properly Presented

Property Preserved  
(Y) or N

### 5) Received Within Holding Times

(Y) or N

COC Tape was:

1) Present on Outer  
Package ☒ Y or N

2) Unbroken on Outer  
Package Y or N

3) Present on Sample ☒ or N

4) Unbroken on  
Sample (Y) or N

COC Record Present  
Upon Sample Rec't

(Y) or N

4.3

Relinquished by	Received by	Date	Time
Yed Ex	D. J. [Signature]	4/30/99	0900

Relinquished by	Received by	Date	Time
<div style="text-align: center;"> <b>ORIGINAL</b>  <b>REWRITTEN</b> </div>			

Discrepancies Between  
Samples Labels and  
COC Record? Y or (N)  
NOTES:

\* 4235 79525371

<b>Bechtel Hanford Inc.</b>		<b>CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST</b>				B99-062-02		Page 1 of 1	
Collector R. Nielson/D. Bowers		Company Contact Joan Kessner		Telephone No. 375-4688		Project Coordinator WEISS, RL		Price Code 72 hrs	
Project Designation 3728 Building Floor Sealer		Sampling Location 300 Area		SAF No. B99-062		Data Turnaround <b>Business D</b>			
Ice Chest No. ERC 99-005012		Field Logbook No. EL-1381-2		Method of Shipment Federal Express					
Shipped To TMA/RECRA 4-28-99		Offsite Property No. A990126		Bill of Lading/Air Bill No. 4235 7952 5371					
		COA ME4123 A81C							

POSSIBLE SAMPLE HAZARDS/REMARKS    Special Handling and/or Storage Cool 4C	Preservation	Cool 4C	HCl to pH <2 Cool 4C						
	Type of Container	aGs*	aGs*						
	No. of Container(s)	1	3						
	Volume	1000mL	40mL						

SAMPLE ANALYSIS				Semi-VOA - 8270A (TCL)	VOA - 8260A (TCL)						
-----------------	--	--	--	---------------------------	----------------------	--	--	--	--	--	--

Sample No.	Matrix *	Sample Date	Sample Time						
B0VDC7	Water	4-28-99	1306	X	X				
B0VDC8	Water	4-28-99	1621	X	X				
B0VDC9	Water	4-28-99	1628	X	X				

CHAIN OF POSSESSION	Sign/Print Names	SPECIAL INSTRUCTIONS
Relinquished By <i>[Signature]</i> Date/Time 4-28-99 1700	Received By <i>[Signature]</i> Date/Time 4-28-99 1700	** Close SDG upon receipt.   samples from non-red area
Relinquished By <i>[Signature]</i> Date/Time 4-28-99 0930	Received By <i>[Signature]</i> Date/Time 4-28-99 0930	
Relinquished By <i>[Signature]</i> Date/Time 4-28-99 1030	Received By <i>[Signature]</i> Date/Time 4-28-99 1030	
Relinquished By <i>[Signature]</i> Date/Time 4/30/99 0900	Received By <i>[Signature]</i> Date/Time 4/30/99 0900	

LABORATORY SECTION	Received By <i>[Signature]</i>	Date/Time 4/30/99
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By Date/Time

<b>Bechtel Hanford Inc.</b>		<b>CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST</b>				B99-062-01		Page 1 of 1	
Collector R. Nielson/D. Bowers		Company Contact Joan Kessner		Telephone No. 375-4688		Project Coordinator WEISS, RL		Price Code 72 hrs	
Project Designation 3728 Building Floor Sealer		Sampling Location 100N		SAF No. B99-062				Data Turnaround business D	
Ice Chest No. ERC 99-003		Field Logbook No. EL-1381-2		Method of Shipment Federal Express					
Shipped To TMA/RECRA 4-29-99 AM		Offsite Property No. A990125		Bill of Lading/Air Bill No. 4235 7952 5360-4.8					
				COA					

<b>POSSIBLE SAMPLE HAZARDS/REMARKS</b>   <b>Special Handling and/or Storage</b> Cool 4C	Preservation	Cool 4C							
	Type of Container	aGs*							
	No. of Container(s)	1							
	Volume	40mL							
SAMPLE ANALYSIS		VOA - 6260A (TCL)							

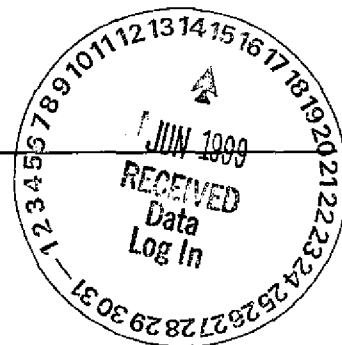
Sample No.	Matrix *	Sample Date	Sample Time						
B0VDC6	0.1% Water 4-28-99	4-28-99	1326	X					
	4-29-99								

<b>CHAIN OF POSSESSION</b>	<b>Sign/Print Names</b>	<b>SPECIAL INSTRUCTIONS</b> ** Sample B0VDC6 is original floor sealant material (greater than 40% organic). Ship VOA bottles only for this sample. ** Close SDG upon receipt.  on ice in ERC 97-079  samples from non rod area	<b>Matrix *</b> Soil Water Vapor Other Solid Other Liquid
Relinquished By Doug Bowers	Date/Time 4-28-99/1700	Received By 3728 b/ds	Date/Time 4-28-99/1700
Relinquished By cooler	Date/Time 4-29-99/0920	Received By Doug Bowers	Date/Time 4-29-99/0930
Relinquished By Doug Bowers	Date/Time 4-29-99/1030	Received By Cool Ex	Date/Time
Relinquished By Julie	Date/Time 4/30/99 0900	Received By D Smith	Date/Time 4/30/99 0900

<b>LABORATORY SECTION</b>	Received By _____ Title _____	Date/Time _____
<b>FINAL SAMPLE DISPOSITION</b>	Disposal Method _____ Disposed By _____	Date/Time _____



**Recra LabNet Philadelphia  
Analytical Report**

**Client :** TNU-HANFORD B99-062  
**RFW# :** 9904L832  
**SDG/SAF#:** H0395/B99-062

**W.O #:** 10985-001-001-9999-00  
**Date Received:** 04-30-99

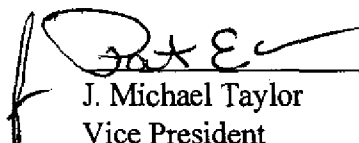
**GC SCAN**

The set of samples consisted of (3) aqueous samples collected 04-28-99. Sample B0VDC6 was used as reference material for the analysis.

The samples were analyzed using GC-FID direct injection for characterization analysis on 05-07-99.

1. The quantitative reference was a 100-fold dilution of sample B0VDC6 into reagent water.
2. The analysis results are summarized as follows:

			Client Sample ID		
	Retention Time (min)	B0VD6 1:100 dilution	B0VDC7	B0VDC8	B0VDC9
Peak 1	0.830	120487	7346	8000	8637
Peak 2	3.820	568048	0	0	102862
Peak 3	8.700	75780	0	0	0
Sum of Peak Heights		764315	7346	8000	111499
		<b>Result (% of B0VD6)</b>	<b>0.010</b>	<b>0.010</b>	<b>0.15</b>

  
J. Michael Taylor  
Vice President  
Philadelphia Analytical Laboratory

R:\SHARE\LC\GCSCAN\04-832.doc

6-1-99  
Date

The results presented in this report relate only to the analytical testing and conditions of the samples at receipt and during storage. All pages of this report are integral parts of the analytical data. Therefore, this report should only be reproduced in its entirety of 4 pages.

001

## 002

Page 1 of 1

<b>Bechtel Hanford Inc.</b>		<b>CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST</b>				B99-062-02		Page 1 of 1	
Collector R. Nielson/D. Bowers		Company Contact Joan Kessner		Telephone No. 375-4688		Project Coordinator WEISS, RL		Price Code 72 hrs	
Project Designation 3728 Building Floor Scaler		Sampling Location 300 Area		SAF No. B99-062				Data Turnaround <b>business D</b>	
Ice Chest No. ERC 99-005012		Field Logbook No. EL-1381-2		Method of Shipment Federal Express					
Shipped To IMM/RECRA 4-29-99		Offsite Property No. A990126		Bill of Lading/Air Bill No. 4235 7952 5371					
				COA ME4123 481C					

<b>POSSIBLE SAMPLE HAZARDS/REMARKS</b>	Preservation	Cool 4C	HCl to pH <2 Cool 4C						
	Type of Container	aGs*	aGs*						
	No. of Container(s)	1	3						
	Special Handling and/or Storage Cool 4C	Volume	1000mL	40mL					

<b>SAMPLE ANALYSIS</b>				Semi-VOA - 8270A (TCL)	VOA - 8260A (TCL)								
Sample No.	Matrix *	Sample Date	Sample Time										
B0VDC7	Water	4-28-99	1306	X	X								
B0VDC8	Water	4-28-99	1621	X	X								
B0VDC9	Water	4-28-99	1628	X	X								

<b>CHAIN OF POSSESSION</b>		<b>Sign/Print Names</b>		<b>SPECIAL INSTRUCTIONS</b> ** Close SDG upon receipt.		<b>Matrix *</b> Soil Water Vapor Other Solid Other Liquid
Relinquished By <i>R. Nielson</i>	Date/Time 4/28/99 1700	Received By <i>Ref. 1A</i>	Date/Time 4/28/99 1700	samples from non-red ore		
Relinquished By <i>Dorey Bowers</i>	Date/Time 4-28-99 0930	Received By <i>Dorey Bowers</i>	Date/Time 4-28-99/0930			
Relinquished By <i>Dorey Bowers</i>	Date/Time 4-29-99/1030	Received By <i>Eric Ex</i>	Date/Time			
Relinquished By <i>Eric Ex</i>	Date/Time 4/30/99/0900	Received By <i>D. Jones</i>	Date/Time 4/30/99/0900			

<b>LABORATORY SECTION</b>	Received By			Title	Date/Time
<b>FINAL SAMPLE DISPOSITION</b>	Disposal Method			Disposed By	Date/Time

<b>Bechtel Hanford Inc.</b>		<b>CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST</b>					B99-062-01	Page 1 of 1		
Collector R. Nielson/D. Bowers		Company Contact Joan Kessner		Telephone No. 375-4688		Project Coordinator WEISS, RL		Price Code  72 hrs	Data Turnaround <b>business D</b>	
Project Designation 3728 Building Floor Sealer		Sampling Location 100N		SAF No. B99-062						
Ice Chest No. <b>ERC 99-003</b>		Field Logbook No. EL-1381-2		Method of Shipment Federal Express					100	
Shipped To DRA/RECRA 4-22-99 AFB		Offsite Property No. <b>A990125</b>		Bill of Lading/Air Bill No. <b>4235 7952 5360 - 4.8</b>						
				COA						
<b>POSSIBLE SAMPLE HAZARDS/REMARKS</b>				Preservation		Cool 4C				
				Type of Container		aGs*				
				No. of Container(s)		1				
				Volume		40mL				
<b>SAMPLE ANALYSIS</b>				VOA - 8260A (TCL)						
Sample No.		Matrix *		Sample Date		Sample Time				
B0VDC6		0.5 g Soil / 100 ml 4-29-99		4-28-99		1326		X		
<b>CHAIN OF POSSESSION</b>		<b>Sign/Print Names</b>				<b>SPECIAL INSTRUCTIONS</b> ** Sample B0VDC6 is original floor sealant material (greater than 40% organic). Ship VOA bottles only for this sample. ** Close SDG upon receipt.				Matrix *  Soil Water Vapor Other Solid Other Liquid
Relinquished By <i>Doug Bowers</i>		Date/Time		Received By <i>3728 Bldg</i>		Date/Time				
<i>Doug Bowers</i>		4-28-99/1700		<i>cooling ERC 97-079</i>		4-28-99/1700				
Relinquished By		Date/Time		Received By <i>Doug Bowers</i>		Date/Time				
<i>cooling ERC 97-079</i>		4-29-99/0920		<i>Doug Bowers</i>		4-29-99/0930				
Relinquished By <i>Doug Bowers</i>		Date/Time		Received By		Date/Time				
<i>Doug Bowers</i>		4-29-99/1030		<i>Loe Ex</i>						
Relinquished By		Date/Time		Received By		Date/Time				
<i>Deleup</i>		4/30/99 0900		<i>D Smith</i>		4/30/99 0900				
<b>LABORATORY SECTION</b>		Received By				Title				Date/Time
<b>FINAL SAMPLE DISPOSITION</b>		Disposal Method				Disposed By				Date/Time